

Application No.: 10/669,371
Art Unit 2871

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REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application. Claims 1~9 and 12~23 are pending in the present application. Claims 7~9, 17 and 18 are withdrawn. In this Office Action, claims 1~6, 10~16, 19~23 are rejected. By this reply, claims 1, 12, 19 and 21 have been amended. Claims 1, 12, 19 and 21 are independent claims. No new matter has been introduced by this Amendment. Reexamination and reconsideration of the pending claims is respectfully requested.

In the Office Action, claims 21-22 are rejected under 35 USC 102(b) as being anticipated by Moon et al. (US 2002/0044246, hereinafter "Moon"). Claims 1-6 and 12-16 are rejected under 35 USC 103(a) as being unpatentable over Moon in view of Kim et al. (KR 10-1999-0024956, hereinafter "Kim"). Claims 19-20 and 23 are rejected under 35 USC 103(a) as being unpatentable over Moon in view of Song et al. (US 2002/0008794, hereinafter "Song").

Claim 1 is allowable over Moon and Kim in that claim 1, as amended, recites the following, for example, "a picture display part having liquid crystal cells at each intersection of gate lines and data lines; data pads extended from the data lines in an outer area of the picture display part; gate pads extended from the gate lines in the outer area of the picture display part; a plurality of first line-on glass signal pads formed just beside an end of the data pads and a plurality of second line-on glass signal pads formed just beside an end of the gate pads, the first and second line-on glass signal pads are in one corner of the outer area of the picture display part; a plurality of first line-on glass signal pads formed just beside an end of the data pads and a plurality of second line-on glass signal pads formed just beside an end of the gate pads, the first and second line-on glass signal pads being in one corner of the outer area of the picture display part; a plurality of line-on glass type signal lines connecting the first and second line-on glass signal pads in the corner of the outer area of the picture display part for applying gate power voltage signals and gate control signals to gate drive ICs in order to drive gate signal lines of the

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picture display part; a plurality of first dummy pads between the first line-on glass type signal pads and a plurality of second dummy pads between the second line-on glass type signal pads; and a plurality of dummy lines connecting the first and second dummy pads in the one corner of the outer area of the picture display part, wherein the plurality of dummy lines are formed between the line-on glass type signal lines for applying a common voltage as a reference voltage to drive the liquid crystal cells with at least one layer of insulating film therebetween, wherein the insulating film covers the plurality of line-on glass type signal lines and the dummy line is formed on the layer of the insulating film.”

None of cited references including Moon and Kim, singly or in combination, teach or suggest at least the features of “each of line-on glass type signal lines is formed between the first and the second line-on glass pads in the one corner of the outer area of the picture display part”, “a plurality of first dummy pads between the first line-on glass type signal pads and a plurality of second dummy pads between the second line-on glass type signal pads” and “a plurality of dummy lines connecting the first and second dummy pads in the one corner of the outer area of the picture display part, wherein the plurality of dummy lines are formed between the line-on glass type signal lines for applying a common voltage as a reference voltage to drive the liquid crystal cells with at least one layer of insulating film therebetween.”

Further, the dummy lines are on the insulating layer and the insulating layer covers the line-on glass type signal lines. Therefore, the dummy line is above the line-on glass type signal lines and the dummy line is a different layer from the line-on glass type signal lines.

In this Office Action, the Examiner compares “a plurality of line-on glass type signal lines” of the claimed invention with 138 (dummy line) of Moon. However, the dummy lines 138 of Moon is parallel to the common voltage lines 128B and adjacent to the common voltage lines 128B for applying alternating current signals (see paragraph [0039] of Moon). That is, the dummy line 138 is a different line from the common voltage line 128B and is applied with alternating current signals. Herein, Moon shows that the alternating current voltage is applied to the liquid

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crystal 133 in the outer area of the TFT array 127, like the liquid crystal of the TFT array 127, so that deterioration of liquid crystal caused by a direct current voltage in the prior art can be prevented (see paragraph [0040] of Moon). See also Fig. 7 of Moon.

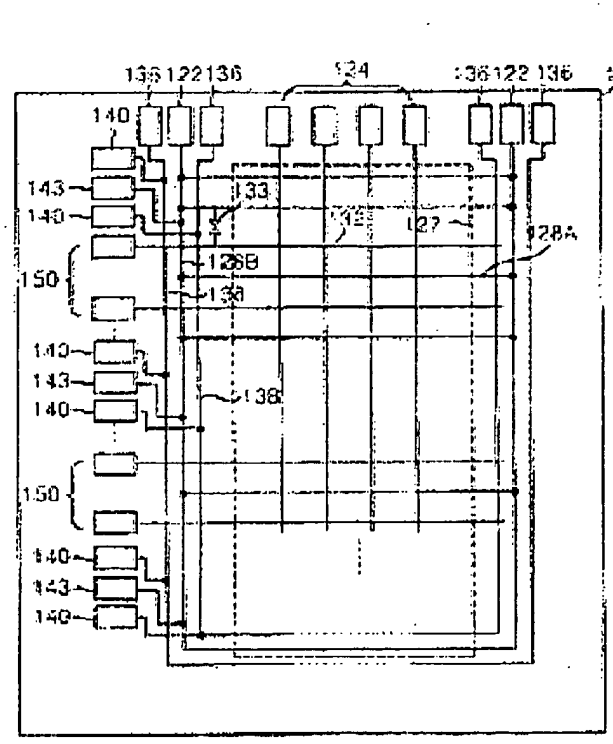


Fig. 7 of Moon

On the contrary, the claimed invention discloses that the line-on glass type signal lines 44 connecting the first and second line-on glass signal pads (52, 54) in the corner of the outer area of the picture display part for applying gate power voltage signals and gate control signals to gate drive ICs in order to drive gate signal lines of the picture display part. See Fig. 4 of the present application.

That is, the line-on glass type signal lines 44 are for applying gate power voltage signals and gate control signals to gate drive ICs. Therefore, the line-on glass type signal lines of the claimed invention and the dummy lines of Moon are applied with completely different signals, respectively.

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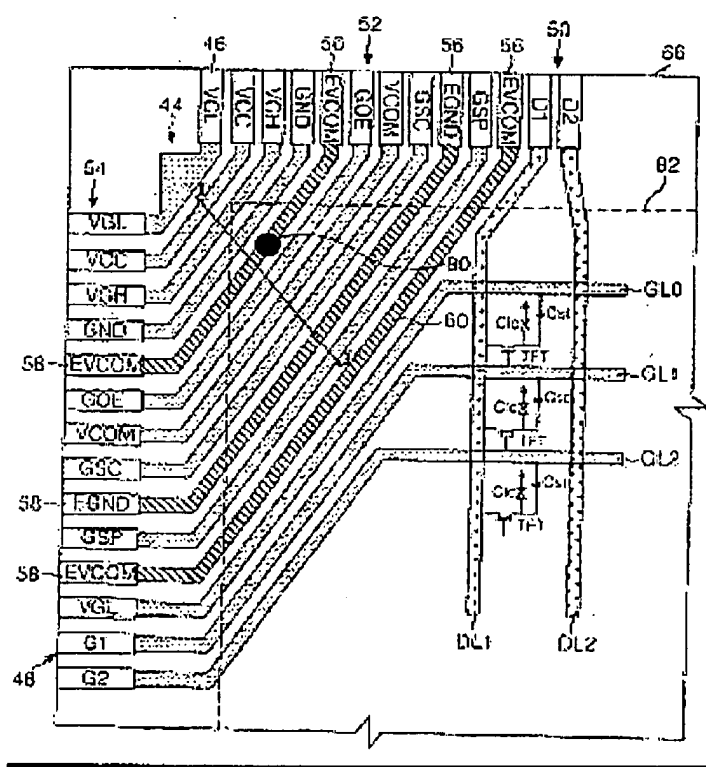


Fig. 4 of the present application

Further, the Examiner argues that Kim shows the insulating film 640 covers the plurality of line-on glass type signal lines 620 or 621 and dummy line 700 is formed on the layer of the insulating film. However, referring Fig. 4 of Kim, the above argument is not true because the insulating layer covers data lines 621 (line-on glass lines) and ground line 700 (dummy line), together. Therefore, Kim does not disclose the feature of "the dummy line is on the insulating layer" of the claimed invention. Kim just teaches that the dummy lines are covered by the insulating layer.

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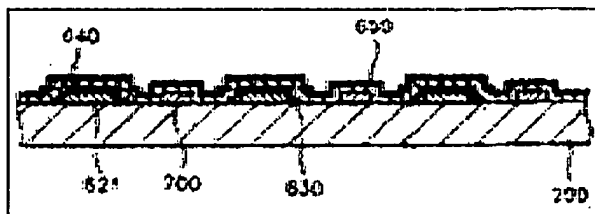


Fig. 4 of Kim

As stated above, none of the cited references, singly or in combination, teach or suggest at least these features of the claimed invention. Accordingly, Applicant respectfully submits that claim 1 and claims 2-6, which depend therefrom, are allowable over the cited references.

Similarly stated above, claim 12 is allowable over Moon and Kim in that claim 12, as amended, recites the features, for example, **“forming gate lines in a picture display part and a plurality of line-on glass signal lines in one corner of an outer area of the picture display part on a substrate for applying gate power voltage signals and gate control signals to gate drive ICs in order to drive gate signal lines of the picture display part;”**, **“forming at least one layer of insulating film to cover the line-on glass type signal lines;”**, **“forming data lines to cross the gate lines in a picture display part and a dummy line that is located between the line-on glass signal lines on the insulating film for applying a common voltage as a reference voltage;”**, **“forming data pads extended from the data lines and gate pads extended from the gate lines in the outer of the picture display part”** and **“forming first and second line-on glass signal pads just beside the data pads and gate pads, respectively, and first dummy pads between the first line-on glass signal pads and second dummy pads between the second line-on glass pads, respectively, in one corner of the outer area of the picture display part, wherein each of the plurality of the line-on glass signal lines is connected between the first and the second line-on glass signal pads in the one corner of the outer area of the picture display part.”**

As similarly stated above, none of the cited references, singly or in combination, teach or

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suggest at least this feature of the claimed invention. Accordingly, Applicant respectfully submits that claim 13 and claims 14 and 15, which depend therefrom, are allowable over the cited references.

Further, Song fails to cure the deficiencies of Kim and Moon.

Claim 19 is allowable over Kim, Moon and Song in that claim 19, as amended, recites the features, for example, **“a plurality of line-on glass type signal lines located in one corner of an outer area of the picture display part of a lower substrate for applying drive signals to drive the liquid crystal cells, wherein the one corner of the outer area of the picture display part is corresponding to between the gate pad and the data pad;”**, **“an insulating layer covering the line-on glass type signal lines;”** and **“a plurality of common voltage signal lines for applying a common voltage signal and being formed between line-on glass type signal lines, on the insulating layer”** in the claimed invention

Therefore, none of the cited references including Moon, Kim and Song, singly or in combination, teach or suggest at least this feature of the claimed invention. Accordingly, Applicant respectfully submits that claim 19 and claim 20, which depends from claim 19, are allowable over the cited references.

Claim 21 is allowable over Moon in that claim 21, as amended, recites the feature, for example, **“a plurality of line-on glass type signal lines located in one corner of an outer area of the picture display part of a lower substrate for applying drive signals to drive the liquid crystal cells, wherein the one corner is between the gate pad and the data pad;”**, **“an insulating layer covering the line-on glass type signals and the gate lines;”** and **“a plurality of dummy lines that formed between the line-on glass type signal lines on the insulating layer, wherein the dummy lines and the data lines on the insulating layer and the dummy lines are a common voltage line or a ground voltage line.”**

As similarly stated above, none of the cited references including Moon and Song, singly or in combination, teach or suggest at least this feature of the claimed invention. Accordingly,

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Applicant respectfully submits that claim 21 and claims 22-23, which depend from claim 21, are allowable over the cited references.

Applicant believes the foregoing remarks establish that the application in condition for allowance and early, favorable action is respectfully solicited.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

The Examiner is respectfully requested to enter this Amendment After Final, in that it raises no new issues but merely places the claims in a form more clearly patentable over the references of record. In the alternative, the Examiner is respectfully requested to enter this Amendment After Final in that it reduces the issues for appeal.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Jun S. Ha, Registration No. 58,508, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

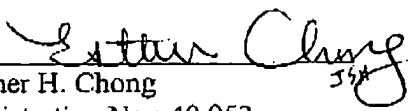
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: January 15, 2009

Respectfully submitted,

By 
Esther H. Chong
Registration No.: 40,953
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant
Telephone: (703) 205-8000